

WHAT IS CLAIMED IS:

1. An image processing apparatus for receiving an agent including an operation train via a network and allowing an image processing unit to execute image processes, comprising:

control means for controlling said image processing unit;

interpreting means for interpreting said operation train of said agent; and

message output means for outputting a message to said control means in response to said operation train interpreted by said interpreting means.

2. An apparatus according to claim 1, wherein said control means controls said image processing unit in accordance with said message outputted by said message output means.

3. An apparatus according to claim 1, wherein said agent includes data.

4. An apparatus according to claim 3, wherein said control means allows said image processing unit to perform image processes by using said data of said agent in accordance with said message outputted by said message output means.

5. An apparatus according to claim 1, wherein said control means allows information of said image processing unit to be outputted in accordance with said message outputted by said message output means.

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6. An apparatus according to claim 2, wherein said control means controls said image processing unit on the basis of an operation train of a control agent including said operation train.

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7. An apparatus according to claim 6, wherein said control agent is resident in said image processing apparatus.

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8. An apparatus according to claim 1, further comprising:

a plurality of image processing units; and
said control means provided for each of said image processing units.

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9. An apparatus according to claim 1, wherein an identifier to identify said control means is added to said operation train, and

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said message output means outputs said message to said control means shown by said identifier.

10. An apparatus according to claim 1, further

comprising transmitting means for transmitting said agent to another apparatus via the network, and

wherein said operation train includes an operation to move said agent to the other apparatus by said transmitting means.

11. An apparatus according to claim 1, wherein said operation train of said agent includes an operation to use data which was image-processed by said image processing unit as said data of said agent.

12. An apparatus according to claim 1, wherein said operation train of said agent includes an operation of a conditional loop.

13. An apparatus according to claim 1, wherein said operation train of said agent includes an operation of a condition branch.

14. An apparatus according to claim 1, wherein said agent has a pointer to indicate a certain operation in said operation train.

15. An apparatus according to claim 14, wherein said interpreting means interprets the operation indicated by said pointer, and after the interpretation of said operation was

finished, said pointer indicates a next operation.

16. An apparatus according to claim 1, wherein when
the interpretation of a series of operation train in
5 the operation train of said agent is finished, said
interpreting means extinguishes said agent.

17. An apparatus according to claim 1, wherein said
interpreting means interprets a plurality of said
10 agents in parallel.

18. An apparatus according to claim 1, further
comprising decoding means for decoding said encoded
agent which was received via the network.

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19. An apparatus according to claim 10, further
comprising encoding means for encoding said agent, and
wherein said transmitting means transmits said
encoded agent.

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20. An apparatus according to claim 1, wherein said
image processing unit is an engine controller.

21. An apparatus according to claim 1, wherein said
25 image processing unit is a printer engine.

22. An apparatus according to claim 1, wherein said

image processing unit is a scanner engine.

23. A control method of receiving an agent
including an operation train via a network and allowing
5 an image processing unit to execute image processes,
comprising:

a control step of controlling said image
processing unit;

an interpreting step of interpreting said
10 operation train of said agent; and

a message output step of outputting a message to
said control step in response to said operation train
interpreted by said interpreting step.

15 24. A method according to claim 23, wherein in said
control step, said image processing unit is controlled
in accordance with said message outputted by said
message output step.

20 25. A method according to claim 23, wherein said
agent includes data.

26. A method according to claim 25, wherein in said
control step, said image processing unit is allowed to
25 perform image processes by using said data of said
agent in accordance with said message outputted by said
message output step.

27. A method according to claim 23, wherein in said control step, information of said image processing unit is outputted in accordance with said message outputted by said message output step.

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28. A method according to claim 24, wherein in said control step, said image processing unit is controlled on the basis of an operation train of a control agent including said operation train.

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29. A method according to claim 23, further comprising:

a plurality of image processing units; and
said control step provided for each of said image
15 processing units.

30. A method according to claim 23, wherein
an identifier to identify said control step is
added to said operation train, and
20 in said message output step, said message is
outputted to said control step shown by said
identifier.

31. A method according to claim 23, further
25 comprising a transmitting step of transmitting said
agent to another apparatus via the network, and
wherein said operation train includes an operation

to move said agent to the other apparatus by said transmitting step.

32. A method according to claim 23, wherein said
5 operation train of said agent includes an operation to use data which was image-processed by said image processing unit as said data of said agent.

33. A method according to claim 23, wherein said
10 operation train of said agent includes an operation of a conditional loop.

34. A method according to claim 23, wherein said
15 operation train of said agent includes an operation of a condition branch.

35. A method according to claim 23, wherein said
20 agent has a pointer to indicate a certain operation in said operation train.

36. A method according to claim 35, wherein
in said interpreting step, the operation indicated by said pointer is interpreted, and
after the interpretation of said operation was
25 finished, said pointer indicates a next operation.

37. A method according to claim 23, wherein when

the interpretation of a series of operation train in the operation train of said agent is finished, said agent is extinguished in said interpreting step.

5 38. A method according to claim 23, wherein a plurality of said agents are interpreted in parallel in said interpreting step.

10 39. A method according to claim 23, further comprising a decoding step of decoding said encoded agent which was received via the network.

15 40. A method according to claim 31, further comprising an encoding step of encoding said agent, and wherein said encoded agent is transmitted in said transmitting step.

20 41. A method according to claim 23, wherein said image processing unit is an engine controller.

42. A method according to claim 23, wherein said image processing unit is a printer engine.

25 43. A method according to claim 23, wherein said image processing unit is a scanner engine.

44. A storage medium in which a control program for

receiving an agent including an operation train via a network and allowing an image processing unit to execute image processes has been stored, wherein said control program comprises:

5 a control step of controlling said image processing unit;

 an interpreting step of interpreting said operation train of said agent; and

 a message output step of outputting a message to
10 said control step in response to said operation train interpreted by said interpreting step.

 45. A medium according to claim 44, wherein in said control step, said image processing unit is controlled
15 in accordance with said message outputted by said message output step.

 46. A medium according to claim 44, wherein said agent includes data.
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 47. A medium according to claim 46, wherein in said control step, said image processing unit is allowed to perform image processes by using said data of said agent in accordance with said message outputted by said
25 message output step.

 48. A medium according to claim 44, wherein in said

control step, information of said image processing unit is outputted in accordance with said message outputted by said message output step.

5 49. A medium according to claim 45, wherein in said control step, said image processing unit is controlled on the basis of an operation train of a control agent including said operation train.

10 50. A medium according to claim 44, wherein said control program further comprises:
 a plurality of image processing units; and
 said control step provided for each of said image processing units.

15 51. A medium according to claim 44, wherein
 an identifier to identify said control step is added to said operation train, and
 in said message output step, said message is
20 outputted to said control step shown by said identifier.

 52. A medium according to claim 44, wherein said control program further comprises a transmitting step
25 of transmitting said agent to another apparatus via the network, and
 said operation train includes an operation to move

said agent to the other apparatus by said transmitting step.

53. A medium according to claim 44, wherein said
5 operation train of said agent includes an operation to use data which was image-processed by said image processing unit as said data of said agent.

54. A medium according to claim 44, wherein said
10 operation train of said agent includes an operation of a conditional loop.

55. A medium according to claim 44, wherein said
operation train of said agent includes an operation of
15 a condition branch.

56. A medium according to claim 44, wherein said
agent has a pointer to indicate a certain operation in
said operation train.
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57. A medium according to claim 56, wherein
in said interpreting step, the operation indicated
by said pointer is interpreted, and
after the interpretation of said operation was
25 finished, said pointer indicates a next operation.

58. A medium according to claim 44, wherein when

the interpretation of a series of operation train in the operation train of said agent is finished, said agent is extinguished in said interpreting step.

5 59. A medium according to claim 44, wherein a plurality of said agents are interpreted in parallel in said interpreting step.

10 60. A medium according to claim 44, wherein said control program further comprises a decoding step of decoding said encoded agent which was received via the network.

15 61. A medium according to claim 52, wherein said control program further comprises an encoding step of encoding said agent, and

 said encoded agent is transmitted in said transmitting step.

20 62. A medium according to claim 44, wherein said image processing unit is an engine controller.

 63. A medium according to claim 44, wherein said image processing unit is a printer engine.

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 64. A medium according to claim 44, wherein said image processing unit is a scanner engine.